

*Telegraphic Communication Interfered with by Atmospheric Electricity.*—Ft. Grant, Ariz., 8th, peculiar electrical condition of the atmosphere, sufficient motive force to occasionally work instruments on the line between this station and Ft. Verde, although there was no battery attached. The galvanometer was constantly effected with an electro motive force of ordinary intensity which acted in a contrary direction to that usually displayed. Later in the day quantity of force increased, but intensity diminished between the two stations; finally current changed to opposite direction, followed soon after by a fluctuating quantity. La Mesilla, 5th; Jacksboro, Texas, 6th, 9th, 11th; San Antonio, Tex., 24th; Laredo, Tex., 25th, discharges so heavy as to melt brass connections in office.

## OPTICAL PHENOMENA.

*Solar Halos* have been observed in the various districts on the following dates: New England, 6th, 8th, 25th, 29th and 30th; Middle Atlantic States, 3rd, 6th, 8th, 10th, 12th, 15th, 16th, 19th, 21st, 22nd and 29th; South Atlantic States, 7th, 8th, 14th, 15th, 21st and 22nd; Eastern Gulf States, 13th, 25th, 27th, 28th and 30th; Western Gulf States, including Texas, 6th, 7th, 12th, 13th, 14th, 15th, 21st, 23rd and 29th; Ohio valley and Tennessee, 2nd, 7th, 11th, 12th, 14th, 18th, 21st, 23rd, 25th and 28th; Lower Lake region, 7th, 11th, 12th, 29th and 30th; Upper Lake region, 2nd, 7th, 9th, 10th, 11th, 27th and 29th; Upper Mississippi valley, 6th, 7th, 9th to 11th, 14th, 15th, 18th, 28th to 31st; Lower Missouri valley, 1st, 5th, 6th, 17th, 19th, 23rd, 27th to 31st; Rocky Mountain regions, 13th, 14th, 15th, 17th, 27th and 30th; Northern and Middle Plateau regions, 3rd, 4th, 8th, 9th and 25th; California, 2nd, 3rd, 4th, 9th, 18th, 23rd to 30th; Oregon and Washington Territory, 3rd, 10th, 11th, 17th, 20th, 22nd, 24th, 28th to 31st.

*Lunar Halos* have been observed in the various districts on the following dates: New England, 5th, 6th, 8th, 9th, 11th, 12th, 15th to 18th; Middle Atlantic States, 3rd, 6th, 8th, 10th, 11th, 14th, 15th, 16th and 26th; South Atlantic States, 6th, 7th, 11th to 15th; Eastern Gulf States, 6th, 7th, 9th, 11th, 12th, 14th and 17th; Western Gulf States, including Texas, 3rd, 4th, 6th to 8th, 11th, 17th and 30th; Ohio valley and Tennessee, 2nd, 6th, 10th, 13th to 17th, 23rd and 27th; Lake region, 7th to 11th, 14th, 15th and 25th; Upper Mississippi valley, 3rd to 7th, 10th to 12th, 14th, 20th and 25th; Lower Missouri valley, 5th to 11th, 13th, 16th and 19th; Rocky Mountain regions, 6th, 8th, 9th, 12th, 14th to 19th; Southern Plateau, 6th, 7th, 8th and 11th; Northern Plateau, 6th, 8th, 10th, 11th and 22nd; California, 7th; Oregon and Washington Territory, 6th, 9th, 10th, 11th, 14th, 15th, 22nd and 24th.

*Mirage.*—Spiritwood, Dak., 5th, 8th, 19th and 26th; Genoa, Neb., 1st, 2nd, 3rd, 5th, 16th, 19th and 21st; Indianola, 4th and 8th.

## MISCELLANEOUS PHENOMENA.

*Sun Spots.*—The following record of observations, made by Mr. D. P. Todd, Assistant, has been forwarded by Prof. S. Newcomb, U. S. Navy, Superintendent Nautical Almanac Office, Washington, D. C.:

DATE— March, 1881.	No. of new—		Disappeared by solar rotation.		Reappeared by solar rotation.		Total number visible.		REMARKS.
	Groups	Spots.	Groups	Spots.	Groups	Spots.	Groups	Spots.	
2. 8 a. m.	1	2	2	2	1	2	3	8	Faculae. Spots probably disappeared by solar rotation.
5 p. m.	0	0	0	0	0	0	3	8	
4. 2 p. m.	0	0	1	3	0	0	1	1	Faculae.
5. 8 a. m.	0	0	0	0	0	0	1	1	Faculae.
6. 10 a. m.	0	2	0	0	0	0	1	3	Faculae.
2 p. m.	0	0	0	0	0	0	1	3	
7. 9 a. m.	1	1	0	0	1	1	2	4	Broad areas of faculae.
8. 9 a. m.	3	8	0	0	2	7	5	12	Broad areas of faculae.
1 p. m.	0	0	0	0	0	0	5	12	Broad areas of faculae.
10. 4 p. m.	0	2†	0	0	0	0	5	25†	Faculae. Many of the spots small.
5 p. m.	0	0	0	0	0	0	5	25†	
11. 9 a. m.	0	10	0	0	0	0	5	45†	Faculae. Many of the spots small.
11 a. m.	0	0	0	0	0	0	5	45†	
13. 1 p. m.	2	1†	0	0	0	0	5	30†	Faculae.
14. 8 a. m.	2	20†	0	0	1	10†	7	85†	Faculae.
15. 9 a. m.	0	0	0	0	0	0	7	85†	Faculae.
16. 9 a. m.	0	0	0	0	0	0	6	85†	Faculae. Many of the spots small.
4 p. m.	0	0	0	0	0	0	6	85†	
20. 10 a. m.	1	1	0	0	0	0	3	10†	Faculae.
21. 3 p. m.	2	5	0	0	0	0	5	45†	Faculae.
22. 10 a. m.	0	15	0	0	0	0	4	60†	Faculae.
3 p. m.	0	0	0	0	0	0	4	60†	
23. 8 a. m.	0	5	0	5	0	0	4	60†	Faculae.
24. 6 a. m.	0	0	1	10	0	0	2	40†	Faculae.
25. 5 p. m.	0	0	0	20†	0	0	2	15	Faculae.
27. 8 a. m.	1	2	2	15	1	2	1	2	
28. 7 a. m.	1	1	0	0	0	0	2	3	Faculae.
30. 12 m.	0	2	0	0	0	0	2	5	Faculae.

† Approximated.

Mr. William Dawson, at Spiceland, Ind., reports: 7th, two groups, three spots, one north of centre, two little spots and faculae at east edge: 9th, five groups, 65 spots: 10th, five groups, 78